Water and Metal–Organic Frameworks: From Interac

Chemical Reviews 120, 8303-8377

DOI: 10.1021/acs.chemrev.9b00746

Citation Report

| # | ARTICLE | IF | Citations |
|----|--|-------------|-----------|
| 1 | Metal–Organic Frameworks and Water: â€~From Old Enemies to Friends'?. Trends in Chemistry, 2020, 2, 990-1003. | 4.4 | 35 |
| 2 | Metal–Organic Frameworks for Water Harvesting from Air, Anywhere, Anytime. ACS Central Science, 2020, 6, 1348-1354. | 5.3 | 248 |
| 3 | Selective CO2 adsorption over functionalized Zr-based metal organic framework under atmospheric or lower pressure: Contribution of functional groups to adsorption. Chemical Engineering Journal, 2020, 402, 126254. | 6.6 | 58 |
| 4 | Crystal engineering of porous coordination networks to enable separation of C2 hydrocarbons. Chemical Communications, 2020, 56, 10419-10441. | 2.2 | 123 |
| 5 | Metalâ€Organic Frameworks as Sorption Materials for Heat Transformation Processes. European Journal of Inorganic Chemistry, 2020, 2020, 4502-4515. | 1.0 | 18 |
| 6 | A historical overview of the activation and porosity of metal–organic frameworks. Chemical Society Reviews, 2020, 49, 7406-7427. | 18.7 | 367 |
| 7 | Linker Substituents Control the Thermodynamic Stability in Metal–Organic Frameworks. Journal of the American Chemical Society, 2020, 142, 21720-21729. | 6.6 | 36 |
| 8 | Oneâ€Step Roomâ€Temperature Synthesis of Metal(IV) Carboxylate Metalâ€"Organic Frameworks. Angewandte Chemie, 2021, 133, 4328-4334. | 1.6 | 13 |
| 9 | Oneâ€Step Roomâ€Temperature Synthesis of Metal(IV) Carboxylate Metalâ€"Organic Frameworks. Angewandte Chemie - International Edition, 2021, 60, 4282-4288. | 7.2 | 73 |
| 10 | Screening metal-organic frameworks for adsorption-driven osmotic heat engines via grand canonical Monte Carlo simulations and machine learning. IScience, 2021, 24, 101914. | 1.9 | 24 |
| 11 | Scalable crystalline porous membranes: current state and perspectives. Chemical Society Reviews, 2021, 50, 1913-1944. | 18.7 | 47 |
| 12 | Porous frameworks for effective water adsorption: from 3D bulk to 2D nanosheets. Inorganic Chemistry Frontiers, 2021, 8, 898-913. | 3.0 | 22 |
| 13 | H2S Stability of Metal–Organic Frameworks: A Computational Assessment. ACS Applied Materials & Interfaces, 2021, 13, 4813-4822. | 4.0 | 6 |
| 14 | Gas hydrates in confined space of nanoporous materials: new frontier in gas storage technology. Nanoscale, 2021, 13, 7447-7470. | 2.8 | 28 |
| 15 | Elucidating pore chemistry within metal–organic frameworks <i>via</i> single crystal X-ray diffraction; from fundamental understanding to application. CrystEngComm, 2021, 23, 2185-2195. | 1.3 | 5 |
| 16 | Fluorinated Grapheneâ€Enabled Durable Triboelectric Coating for Water Energy Harvesting. Small, 2021, 17, e2007805. | 5. 2 | 27 |
| 17 | Polyanilineâ€Coated MOFs Nanorod Arrays for Efficient Evaporationâ€Driven Electricity Generation and Solar Steam Desalination. Advanced Science, 2021, 8, 2004552. | 5.6 | 95 |
| 18 | Metal-organic frameworks for environmental applications. Cell Reports Physical Science, 2021, 2, 100348. | 2.8 | 44 |

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 19 | Highâ€Silica CHA Zeolite Membrane with Ultraâ€High Selectivity and Irradiation Stability for Krypton/Xenon Separation. Angewandte Chemie - International Edition, 2021, 60, 9032-9037. | 7.2 | 32 |
| 20 | Metal Organic Frameworks (MOFs) as Photocatalysts for the Degradation of Agricultural Pollutants in Water. ACS ES&T Engineering, 2021, 1, 804-826. | 3.7 | 82 |
| 21 | Highâ€Silica CHA Zeolite Membrane with Ultraâ€High Selectivity and Irradiation Stability for Krypton/Xenon Separation. Angewandte Chemie, 2021, 133, 9114-9119. | 1.6 | 6 |
| 22 | Structural and Hydrolytic Stability of Coordinatively Unsaturated Metal–Organic Frameworks M ₃ (BTC) ₂ (M = Cu, Co, Mn, Ni, and Zn): A Combined DFT and Experimental Study. Journal of Physical Chemistry C, 2021, 125, 5832-5847. | 1.5 | 11 |
| 23 | Evaluating the Robustness of Metal–Organic Frameworks for Synthetic Chemistry. ACS Applied Materials & Samp; Interfaces, 2021, 13, 17517-17531. | 4.0 | 35 |
| 25 | Ultrahigh-Energy-Density Sorption Thermal Battery Enabled by Graphene Aerogel-Based Composite Sorbents for Thermal Energy Harvesting from Air. ACS Energy Letters, 2021, 6, 1795-1802. | 8.8 | 82 |
| 26 | Chemically Stable Hafnium-Based Metal–Organic Framework for Highly Efficient C ₂ H ₆ /C _{/C₄ Separation under Humid Conditions. ACS Applied Materials & Description (1879).} | 4.0 | 34 |
| 27 | Simulation Meets Experiment: Unraveling the Properties of Water in Metal–Organic Frameworks through Vibrational Spectroscopy. Journal of Physical Chemistry C, 2021, 125, 12451-12460. | 1.5 | 16 |
| 28 | High-performance membrane with angstrom-scale manipulation of gas transport channels via polymeric decorated MOF cavities. Journal of Membrane Science, 2021, 625, 119175. | 4.1 | 27 |
| 29 | Cooling performance of metal organic framework-water pairs in cascaded adsorption chillers. Applied Thermal Engineering, 2021, 189, 116707. | 3.0 | 17 |
| 30 | Insights into Catalytic Hydrolysis of Organophosphonates at M–OH Sites of Azolate-Based Metal Organic Frameworks. Journal of the American Chemical Society, 2021, 143, 9893-9900. | 6.6 | 45 |
| 31 | Asymmetric catalysis using metal-organic frameworks. Coordination Chemistry Reviews, 2021, 437, 213845. | 9.5 | 80 |
| 32 | Metal-organic frameworks for energy conversion and water harvesting: A bridge between thermal engineering and material science. Nano Energy, 2021, 84, 105946. | 8.2 | 110 |
| 33 | Advances in adsorptive separation of benzene and cyclohexane by metal-organic framework adsorbents. Coordination Chemistry Reviews, 2021, 437, 213852. | 9.5 | 74 |
| 34 | CaCl2 Nanocrystals decorated photothermal Fe-ferrocene MOFs hollow microspheres for atmospheric water harvesting. Applied Materials Today, 2021, 23, 101076. | 2.3 | 15 |
| 35 | En Route to a Heterogeneous Catalytic Direct Peptide Bond Formation by Zr-Based Metal–Organic Framework Catalysts. ACS Catalysis, 2021, 11, 7647-7658. | 5.5 | 31 |
| 36 | Adsorption-based atmospheric water harvesting. Joule, 2021, 5, 1678-1703. | 11.7 | 165 |
| 37 | Chemical Stability of Metalâ€organic Frameworks for Applications in Drug Delivery. ChemNanoMat, 2021, 7, 998-1007. | 1.5 | 46 |

| # | ARTICLE | IF | CITATIONS |
|----|---|------|-----------|
| 38 | Stable metal-organic frameworks based mixed matrix membranes for Ethylbenzene/N2 separation. Chemical Engineering Journal, 2021, 416, 129193. | 6.6 | 21 |
| 39 | The forgotten chemistry of group(IV) metals: A survey on the synthesis, structure, and properties of discrete Zr(IV), Hf(IV), and Ti(IV) oxo clusters. Coordination Chemistry Reviews, 2021, 438, 213886. | 9.5 | 40 |
| 40 | Fine-Tuning Window Apertures in ZIF-8/67 Frameworks by Metal Ions and Temperature for High-Efficiency Molecular Sieving of Xylenes. ACS Applied Materials & Interfaces, 2021, 13, 40830-40836. | 4.0 | 28 |
| 41 | Water Confined in MIL-101(Cr): Unique Sorption–Desorption Behaviors Revealed by Diffuse Reflectance Infrared Spectroscopy and Molecular Dynamics Simulation. Journal of Physical Chemistry C, 2021, 125, 17786-17795. | 1.5 | 15 |
| 42 | Regulation of hydrophobicity and water adsorption of MIL-101(Cr) through post-synthetic modification. Inorganic Chemistry Communication, 2021, 130, 108741. | 1.8 | 14 |
| 43 | Crystalline porous frameworks as nano-enhancers for membrane liquid separation – Recent developments. Coordination Chemistry Reviews, 2021, 440, 213969. | 9.5 | 27 |
| 44 | Performance-Based Screening of Porous Materials for Carbon Capture. Chemical Reviews, 2021, 121, 10666-10741. | 23.0 | 115 |
| 45 | Hydrophobic Metalâ^'Organic Frameworks and Derived Composites for Microelectronics Applications. Chemistry - A European Journal, 2021, 27, 16543-16563. | 1.7 | 4 |
| 46 | Emerging porous framework material-based nanofluidic membranes toward ultimate ion separation. Matter, 2021, 4, 2810-2830. | 5.0 | 27 |
| 47 | Round-the-clock water harvesting from dry air using a metalâ° organic framework. Chinese Journal of Chemical Engineering, 2022, 49, 170-177. | 1.7 | 5 |
| 48 | Moisture-participating MOF thermal battery for heat reallocation between indoor environment and building-integrated photovoltaics. Nano Energy, 2021, 87, 106224. | 8.2 | 17 |
| 49 | Contribution of hydrogen bonding to liquid-phase adsorptive removal of hazardous organics with metal-organic framework-based materials. Chemical Engineering Journal, 2022, 430, 132596. | 6.6 | 79 |
| 50 | A regulation strategy of sorbent stepwise position for boosting atmospheric water harvesting in arid area. Cell Reports Physical Science, 2021, 2, 100561. | 2.8 | 28 |
| 52 | Improving porosity and water uptake of aluminum metal-organic frameworks (Al-MOFs) as graphite oxide (GO) composites. Microporous and Mesoporous Materials, 2021, 326, 111352. | 2.2 | 4 |
| 53 | The optimal step locations for high-performance adsorption heat pumps under various working conditions. Thermal Science and Engineering Progress, 2021, 25, 101033. | 1.3 | 6 |
| 54 | An updated status and trends in actinide metal-organic frameworks (An-MOFs): From synthesis to application. Coordination Chemistry Reviews, 2021, 446, 214011. | 9.5 | 93 |
| 55 | Ultrahigh water sorption on highly nitrogen doped carbonaceous materials derived from uric acid. Journal of Colloid and Interface Science, 2021, 602, 880-888. | 5.0 | 9 |
| 56 | Development of lithium hydroxide-metal organic framework-derived porous carbon composite materials for efficient low temperature thermal energy storage. Microporous and Mesoporous Materials, 2021, 328, 111455. | 2.2 | 2 |

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 57 | A switchable sensor and scavenger: detection and removal of fluorinated chemical species by a luminescent metal–organic framework. Chemical Science, 2021, 12, 14189-14197. | 3.7 | 26 |
| 58 | Humidity reduction by using hetero-layered metal–organic framework nanosheet composites as hygroscopic materials. Environmental Science: Nano, 2021, 8, 3665-3672. | 2.2 | 11 |
| 59 | Metastable Zr/Hf-MOFs: the hexagonal family of EHU-30 and their water-sorption induced structural transformation. Inorganic Chemistry Frontiers, 2021, 8, 4767-4779. | 3.0 | 8 |
| 60 | Binderâ€Free Growth of Aluminumâ€Based Metal–Organic Frameworks on Aluminum Substrate for Enhanced Water Adsorption Capacity. Advanced Functional Materials, 2022, 32, 2105267. | 7.8 | 23 |
| 61 | An improved water-harvesting cycle. Science, 2021, 374, 402-402. | 6.0 | 6 |
| 62 | Fabrication of 3D Amino-Functionalized Metal–Organic Framework on Porous Nickel Foam Skeleton to Combinate Follicle Stimulating Hormone Antibody for Specific Recognition of Follicle-Stimulating Hormone. Jacs Au, 2021, 1, 2249-2260. | 3.6 | 8 |
| 63 | Evolution of water structures in metal-organic frameworks for improved atmospheric water harvesting. Science, 2021, 374, 454-459. | 6.0 | 281 |
| 64 | A Hydrolytically Stable Cu(II)-Based Metalâ^'Organic Framework with Easily Accessible Ligands for Water Harvesting. ACS Applied Materials & Interfaces, 2021, 13, 49509-49518. | 4.0 | 18 |
| 65 | Carbon nanotubes decorated hollow metal–organic frameworks for efficient solar-driven atmospheric water harvesting. Chemical Engineering Journal, 2022, 430, 133086. | 6.6 | 37 |
| 66 | Chemically Stable Carbazole-Based Imine Covalent Organic Frameworks with Acidochromic Response for Humidity Control Applications. Journal of the American Chemical Society, 2021, 143, 18368-18373. | 6.6 | 40 |
| 67 | Efficient removal of antimonate from water by yttrium-based metal-organic framework: Adsorbent stability and adsorption mechanism investigation. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2022, 633, 127877. | 2.3 | 8 |
| 68 | High Water Adsorption MOFs with Optimized Poreâ€Nanospaces for Autonomous Indoor Humidity Control and Pollutants Removal. Angewandte Chemie, 2022, 134, . | 1.6 | 5 |
| 69 | Water cluster in hydrophobic crystalline porous covalent organic frameworks. Nature Communications, 2021, 12, 6747. | 5.8 | 33 |
| 70 | The Role of Freeâ€Radical Pathway in Catalytic Dye Degradation by Hydrogen Peroxide on the Zrâ€Based UiOâ€66â€NH ₂ MOF. ChemistrySelect, 2021, 6, 11675-11681. | 0.7 | 4 |
| 71 | High Water Adsorption MOFs with Optimized Poreâ€Nanospaces for Autonomous Indoor Humidity Control and Pollutants Removal. Angewandte Chemie - International Edition, 2022, 61, . | 7.2 | 42 |
| 72 | Photocatalytic MOF membranes with two-dimensional heterostructure for the enhanced removal of agricultural pollutants in water. Chemical Engineering Journal, 2022, 435, 133870. | 6.6 | 10 |
| 73 | Structure–Property Correlation of Hierarchically Porous Carbons for Fluorocarbon Adsorption. ACS Applied Materials & Diterfaces, 2021, 13, 54266-54273. | 4.0 | 7 |
| 74 | Highly Water-Permeable Metal–Organic Framework MOF-303 Membranes for Desalination. Journal of the American Chemical Society, 2021, 143, 20055-20058. | 6.6 | 74 |

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 75 | Uranyl phosphonates: crystalline materials and nanosheets for temperature sensing. Dalton Transactions, 2021, 50, 17129-17139. | 1.6 | 9 |
| 76 | Metal–Organic Frameworks/Polymer Composite Membranes. RSC Smart Materials, 2021, , 98-141. | 0.1 | 0 |
| 77 | Ultralow-temperature-driven water-based sorption refrigeration enabled by low-cost zeolite-like porous aluminophosphate. Nature Communications, 2022, 13, 193. | 5.8 | 33 |
| 78 | MOF-enabled confinement and related effects for chemical catalyst presentation and utilization. Chemical Society Reviews, 2022, 51, 1045-1097. | 18.7 | 148 |
| 79 | Eco-friendly hierarchical porous palygorskite/wood fiber aerogels with smart indoor humidity control. Journal of Cleaner Production, 2022, 335, 130367. | 4.6 | 13 |
| 80 | A remarkable adsorbent for denitrogenation of liquid fuel: Ethylenediaminetetraacetic acid-grafted metal–organic framework, MOF-808. Separation and Purification Technology, 2022, 284, 120248. | 3.9 | 14 |
| 81 | Thermal kinetics on adsorption heat transformation based on activated biocarbon and ethanol as working pairs. Materials Letters, 2022, 311, 131622. | 1.3 | 1 |
| 82 | Construction of metal organic framework-derived hollow-structured mesoporous carbon based lithium hydroxide composites for low-grade thermal energy storage. Composites Part B: Engineering, 2022, 232, 109604. | 5.9 | 6 |
| 83 | Facile synthesis of Al-based MOF and its applications in desiccant coated heat exchangers. Renewable and Sustainable Energy Reviews, 2022, 157, 112015. | 8.2 | 26 |
| 84 | Kinetics of Sorption in Hygroscopic Hydrogels. Nano Letters, 2022, 22, 1100-1107. | 4.5 | 65 |
| 85 | MOF@chitosan Composites with Potential Antifouling Properties for Open-Environment Applications of Metal-Organic Frameworks. Solids, 2022, 3, 35-54. | 1.1 | 5 |
| 86 | Screening versatile water/adsorbent working pairs for wide operating conditions of adsorption heat pumps. Sustainable Energy and Fuels, 2022, 6, 309-319. | 2.5 | 3 |
| 87 | Which factors govern the adsorption of peptides to Zr(<scp>iv</scp>)-based metal–organic frameworks?. Materials Advances, 2022, 3, 2475-2487. | 2.6 | 7 |
| 88 | Producing cold from heat with aluminum carboxylate-based metal-organic frameworks. Cell Reports Physical Science, 2022, 3, 100730. | 2.8 | 12 |
| 89 | Significance of an Environmental Gas Cell to Obtain a Fully Dehydrated Form and CO ₂ -Pressurized Structure of a Metal–Organic Framework Using In Situ Single-Crystal X-ray Diffraction at 298 K. Inorganic Chemistry, 2022, 61, 939-943. | 1.9 | 10 |
| 90 | A caveat on the effect of modulators in the synthesis of the aluminum furandicarboxylate metalâ€organic framework MILâ€160. Zeitschrift Fur Anorganische Und Allgemeine Chemie, 0, , . | 0.6 | 2 |
| 91 | A metal-organic framework (MOF)-based temperature swing adsorption cycle for postcombustion CO2 capture from wet flue gas. Chemical Engineering Science, 2022, 250, 117399. | 1.9 | 23 |
| 92 | Sorption-tree with scalable hygroscopic adsorbent-leaves for water harvesting. Journal of Materials Chemistry A, 2022, 10, 6576-6586. | 5.2 | 21 |

| # | Article | IF | CITATIONS |
|-----|---|-----|-----------|
| 93 | Immobilization of Lewis Basic Nitrogen Sites into a Chemically Stable Metal–Organic Framework for Benchmark Waterâ€Sorptionâ€Driven Heat Allocations. Advanced Science, 2022, 9, e2105556. | 5.6 | 17 |
| 94 | Incorporation of free halide ions stabilizes metal–organic frameworks (MOFs) against pore collapse and renders large-pore Zr-MOFs functional for water harvesting. Journal of Materials Chemistry A, 2022, 10, 6442-6447. | 5.2 | 19 |
| 95 | Theoretical Evaluation OfÂAdsorption Desalination Performance of Metal-Organic Frameworks Under Varying Senarios. SSRN Electronic Journal, 0, , . | 0.4 | 0 |
| 96 | Metal organic framework/polyelectrolyte composites for water vapor sorption applications. Dalton Transactions, 2022, , . | 1.6 | 2 |
| 97 | Selective luminescent sensing of metal ions and nitroaromatics over a porous mixed-linker cadmium(<scp>ii</scp>) based metal–organic framework. New Journal of Chemistry, 2022, 46, 8523-8533. | 1.4 | 6 |
| 98 | Synergetic and persistent harvesting of electricity and potable water from ambient moisture with biohybrid fibrils. Journal of Materials Chemistry A, 2022, 10, 8356-8363. | 5.2 | 12 |
| 99 | Large-scale cascade cooling performance evaluation of adsorbent/water working pairs by integrated mathematical modelling and machine learning. Journal of Materials Chemistry A, O, , . | 5.2 | 4 |
| 100 | Sandwich-Structured Carbon Paper/Metal–Organic Framework Monoliths for Flexible Solar-Powered Atmospheric Water Harvesting On Demand. ACS Applied Materials & Demand. ACS ACS Applied Materials & Demand. ACS | 4.0 | 24 |
| 101 | Porphyrin aluminum MOF with ultra-high water sorption capacity: In-situ time-dependent ATR-FTIR spectroscopy and gravimetry to study mechanism of water bonding and desorption. Vibrational Spectroscopy, 2022, 119, 103356. | 1.2 | 8 |
| 102 | Confinement–Unconfinement Transformation of ILs in IL@MOF Composite with Multiple Adsorption Sites for Efficient Water Capture and Release. Advanced Materials Interfaces, 2022, 9, . | 1.9 | 11 |
| 103 | Adsorption-based atmospheric water harvesting: A review of adsorbents and systems. International Communications in Heat and Mass Transfer, 2022, 133, 105961. | 2.9 | 47 |
| 104 | xmins:mmi="http://www.w3.org/1998/Math/MathML" display="inline" id="d1e529" altimg="si146.svg"> <mml:msub><mml:mrow /><mml:mrow><mml:mn>4</mml:mn> </mml:mrow></mml:mrow </mml:msub> /H <mml:math xmins:mml="http://www.w3.org/1998/Math/MathML" display="inline" id="d1e537"</mml:math | 2.2 | 5 |
| 105 | Metal-organic framework (MOF-808) functionalized with ethyleneamines: Selective adsorbent to capture CO2 under low pressure. Journal of CO2 Utilization, 2022, 58, 101932. | 3.3 | 36 |
| 106 | Functional nanomaterials based opto-electrochemical sensors for the detection of gonadal steroid hormones. TrAC - Trends in Analytical Chemistry, 2022, 150, 116571. | 5.8 | 13 |
| 107 | Benefits of metal–organic frameworks sorbents for sorbent wheels used in air conditioning systems. Applied Thermal Engineering, 2022, 210, 118407. | 3.0 | 6 |
| 108 | Confined Water Vapor in ZIF-8 Nanopores. ACS Omega, 2022, 7, 64-69. | 1.6 | 8 |
| 109 | Water Capture Mechanisms at Zeolitic Imidazolate Framework Interfaces. Journal of the American Chemical Society, 2021, 143, 21189-21194. | 6.6 | 28 |
| 110 | FriedlAAder, Knoevenagel, and Michael Reactions Employing the Same MOF: Synthesis, Structure, and | | |

| # | Article | IF | CITATIONS |
|-----|---|------|-----------|
| 111 | Linker Functionalization Strategy for Water Adsorption in Metal–Organic Frameworks. Molecules, 2022, 27, 2614. | 1.7 | 7 |
| 112 | Insights of the adsorbents surface chemical properties effect on water adsorption isotherms. International Journal of Heat and Mass Transfer, 2022, 192, 122842. | 2.5 | 11 |
| 113 | Heterogeneous wettability and radiative cooling for efficient deliquescent sorbents-based atmospheric water harvesting. Cell Reports Physical Science, 2022, 3, 100879. | 2.8 | 20 |
| 114 | Water Harvesting from Air: Current Passive Approaches and Outlook. , 2022, 4, 1003-1024. | | 51 |
| 115 | Water-Stable Carborane-Based Eu ³⁺ /Tb ³⁺ Metalâ€"Organic Frameworks for Tunable Time-Dependent Emission Color and Their Application in Anticounterfeiting Bar-Coding. Chemistry of Materials, 2022, 34, 4795-4808. | 3.2 | 27 |
| 116 | Performance evaluation of a metal organic frameworksÂbased combined dehumidification and indirect evaporative cooling system in different climates. International Journal of Refrigeration, 2022, 140, 186-197. | 1.8 | 8 |
| 117 | Accessing 14-Connected Nets: Continuous Breathing, Hydrophobic Rare-Earth Metal Organic Frameworks Based on 14-c Hexanuclear Clusters with High Affinity for Non-Polar Vapors. ACS Applied Materials & Samp; Interfaces, 2022, 14, 22242-22251. | 4.0 | 7 |
| 118 | A composite coating based on metal–organic framework MIL-101(Cr) synthesised by L-malic acid as mineralising agent for thermal management. Advanced Composites and Hybrid Materials, 2022, 5, 2896-2905. | 9.9 | 15 |
| 119 | Trace removal of benzene vapour using double-walled metal–dipyrazolate frameworks. Nature Materials, 2022, 21, 689-695. | 13.3 | 109 |
| 120 | Hydrothermal Green Synthesis of a Robust Al Metal-Organic-Framework Effective for Water Adsorption Heat Allocations. ACS Sustainable Chemistry and Engineering, 2022, 10, 7010-7019. | 3.2 | 9 |
| 121 | Tailoring a robust Al-MOF for trapping C ₂ H ₆ and C ₂ H ₄ purification from quaternary mixtures. Chemical Science, 2022, 13, 7172-7180. | 3.7 | 30 |
| 122 | MOF supraparticles for atmosphere water harvesting at low humidity. Journal of Materials Chemistry A, 2022, 10, 15116-15126. | 5.2 | 15 |
| 123 | Construction and application of base-stable MOFs: a critical review. Chemical Society Reviews, 2022, 51, 6417-6441. | 18.7 | 147 |
| 124 | Sustainable water generation: grand challenges in continuous atmospheric water harvesting. Energy and Environmental Science, 2022, 15, 3223-3235. | 15.6 | 37 |
| 125 | Water Adsorption on AQSOA-FAM-Z02 Beads. Journal of Chemical & Engineering Data, 2022, 67, 1723-1731. | 1.0 | 4 |
| 126 | Metal-organic frameworks (MOF) based heat transfer: A comprehensive review. Chemical Engineering Journal, 2022, 449, 137700. | 6.6 | 39 |
| 127 | Topologically Driven Pore/Surface Engineering in a Recyclable Microporous Metal–Organic Vessel Decorated with Hydrogen-Bond Acceptors for Solvent-Free Heterogeneous Catalysis. ACS Applied Materials & Decorated with Hydrogeneous, 11, 27941-27954. | 4.0 | 16 |
| 128 | Binary/Ternary MOF Nanocomposites for Multiâ€Environment Indoor Atmospheric Water Harvesting. Advanced Functional Materials, 2022, 32, . | 7.8 | 16 |

| # | Article | IF | CITATIONS |
|-----|--|--------------|-----------|
| 129 | Heat and mass transfer in hygroscopic hydrogels. International Journal of Heat and Mass Transfer, 2022, 195, 123103. | 2.5 | 14 |
| 130 | Water Vapor Adsorption by Porous Materials: From Chemistry to Practical Applications. Journal of Chemical & Ch | 1.0 | 18 |
| 131 | Synthesis of Hierarchicalâ€Porous Fluorinated Metal–Organic Frameworks with Superior Toluene Adsorption Properties. ChemSusChem, 2022, 15, . | 3 . 6 | 3 |
| 132 | Materials for evaporationâ€driven hydrovoltaic technology. , 2022, 1, 449-470. | | 16 |
| 133 | Anti-corrosive propensity of naturally occurring aldehydes and 1-(3-aminopropyl)imidazole condensed Schiff bases: Comparison on the effect of extended conjugation over electron donating substituents. Journal of Molecular Structure, 2022, 1268, 133684. | 1.8 | 10 |
| 134 | Theoretical evaluation of adsorption desalination performance of metal-organic frameworks under varying scenarios. Applied Thermal Engineering, 2022, 215, 119000. | 3.0 | 1 |
| 135 | Competitive Adsorption of NH ₃ and H ₂ O in Metal–Organic Framework Materials: MOF-74. Chemistry of Materials, 2022, 34, 7906-7915. | 3.2 | 4 |
| 136 | Anion-induced morphology control of Al-fumarate MOFs via synergetic coordination and hydrogen bond effects for graded dehumidification. Microporous and Mesoporous Materials, 2022, 343, 112168. | 2.2 | 3 |
| 137 | Prospects for Simultaneously Capturing Carbon Dioxide and Harvesting Water from Air. Advanced Materials, 2022, 34, . | 11.1 | 16 |
| 138 | Flexible Coordination Network Exhibiting Water Vapor–Induced Reversible Switching between Closed and Open Phases. ACS Applied Materials & Interfaces, 2022, 14, 39560-39566. | 4.0 | 6 |
| 139 | Performance evaluation of silicoaluminophosphate with SFO topology for water-sorption-driven heating and cooling systems. Applied Thermal Engineering, 2022, 216, 119100. | 3.0 | 0 |
| 140 | Metal-organic frameworks composed of nitro groups: Preparation and applications in adsorption and catalysis. Chemical Engineering Journal, 2023, 451, 138538. | 6.6 | 39 |
| 141 | Two-linker MOFs-based glass fiber paper monolithic adsorbent for atmospheric water harvesting in arid climates. Journal of Cleaner Production, 2022, 373, 133838. | 4.6 | 7 |
| 142 | Adsorptive removal of carbamazepine and ibuprofen from aqueous solution using a defective Zr-based metal-organic framework. Journal of Environmental Chemical Engineering, 2022, 10, 108560. | 3.3 | 7 |
| 143 | Thermodynamic limits of atmospheric water harvesting. Energy and Environmental Science, 2022, 15, 4025-4037. | 15.6 | 19 |
| 144 | MOF and its application in electrochemistry. , 2022, , 219-253. | | 0 |
| 145 | Fluorinated metal–organic frameworks for gas separation. Chemical Society Reviews, 2022, 51, 7427-7508. | 18.7 | 76 |
| 147 | Temperature Effect on Water Adsorption and Desorption Processes in the Mesoporous Metal–Organic Framework MIL-101(Cr). Journal of Physical Chemistry C, 2022, 126, 15538-15546. | 1.5 | 5 |

| # | Article | IF | Citations |
|-----|--|-----|-----------|
| 148 | Study of the Scale-Up Effect on the Water Sorption Performance of MOF Materials. ACS Materials Au, 2023, 3, 43-54. | 2.6 | 13 |
| 149 | Hierarchically porous composite fabrics with ultrahigh metal–organic framework loading for zero-energy-consumption heat dissipation. Science Bulletin, 2022, 67, 1991-2000. | 4.3 | 15 |
| 150 | Evaluation of PET-derived metal organic frameworks (MOFs) for water adsorption and heat storage. Journal of Porous Materials, 2023, 30, 387-401. | 1.3 | 4 |
| 151 | Metal-organic frameworks for solar-driven atmosphere water harvesting. Chemical Engineering Journal, 2023, 452, 139656. | 6.6 | 19 |
| 152 | Crystallographic Mapping and Tuning of Water Adsorption in Metal–Organic Frameworks Featuring Distinct Open Metal Sites. Journal of the American Chemical Society, 2022, 144, 19567-19575. | 6.6 | 6 |
| 153 | Hygroscopic Porous Polymer for Sorptionâ€Based Atmospheric Water Harvesting. Advanced Science, 2022, 9, . | 5.6 | 23 |
| 154 | Pathways to Energyâ€efficient Water Production from the Atmosphere. Advanced Science, 2022, 9, . | 5.6 | 15 |
| 155 | Historical Developments in Synthesis Approaches and Photocatalytic Perspectives of Metal-Organic Frameworks. , 0, , . | | 1 |
| 156 | A Highly Stable <i>Ortho</i> â€Ketoenamine Covalent Organic Framework with Balanced Hydrophilic and Hydrophobic Sites for Atmospheric Water Harvesting. ChemSusChem, 2022, 15, . | 3.6 | 18 |
| 157 | Metal-organic frameworks (MOFs): A novel platform for laccase immobilization and application. Journal of Environmental Chemical Engineering, 2022, 10, 108795. | 3.3 | 12 |
| 158 | Recent advances in removal of toxic elements from water using MOFs: A critical review. Arabian Journal of Chemistry, 2022, 15, 104319. | 2.3 | 13 |
| 159 | Preparation and applications of metal–organic frameworks composed of sulfonic acid. Coordination Chemistry Reviews, 2023, 474, 214868. | 9.5 | 25 |
| 160 | MOFs with bridging or terminal hydroxo ligands: Applications in adsorption, catalysis, and functionalization. Coordination Chemistry Reviews, 2023, 475, 214912. | 9.5 | 43 |
| 161 | Dense packing of xenon in an ultra-microporous metal–organic framework for benchmark xenon capture and separation. Chemical Engineering Journal, 2023, 453, 139849. | 6.6 | 9 |
| 162 | Simultaneous atmospheric water production and 24-hour power generation enabled by moisture-induced energy harvesting. Nature Communications, 2022, 13, . | 5.8 | 41 |
| 163 | Impacts of Surface Adsorption on Water Uptake within a Metal Organic Nanotube Material. Langmuir, 0, , . | 1.6 | 0 |
| 164 | Excellent ammonia sorption enabled by metal-organic framework nanocomposites for seasonal thermal battery. Energy Storage Materials, 2023, 54, 822-835. | 9.5 | 7 |
| 165 | Hollow fiber membrane supported metal organic framework-based packed bed for gas/vapor adsorption. Chemical Engineering Journal, 2023, 454, 140228. | 6.6 | 1 |

| # | Article | IF | CITATIONS |
|-----|--|------|-----------|
| 166 | Systematic evaluation of water adsorption in isoreticular UiO-type metal–organic frameworks. Journal of Materials Chemistry A, 2023, 11, 1246-1255. | 5.2 | 17 |
| 167 | Ethanol adsorption onto various metal organic frameworks for cooling applications. Thermal Science and Engineering Progress, 2023, 37, 101602. | 1.3 | 1 |
| 168 | Approaching theoretical maximum energy performance for desiccant dehumidification using staged and optimized metal-organic frameworks. Applied Energy, 2023, 331, 120421. | 5.1 | 3 |
| 169 | 墙"å¼¢©ºæ°"å⊷水物ç†å¢™"ææ−™ç"究进展. Chinese Science Bulletin, 2022, , . | 0.4 | 0 |
| 170 | Waterâ€Harvesting Metal–Organic Frameworks with Gigantic Al ₂₄ Units and their Deconstruction into Molecular Clusters. Angewandte Chemie - International Edition, 2023, 62, . | 7.2 | 6 |
| 171 | Nanoarchitectonics of metal–organic frameworks having hydroxy group for adsorption, catalysis, and sensing. Journal of Industrial and Engineering Chemistry, 2023, 119, 181-192. | 2.9 | 8 |
| 172 | Waterâ€Harvesting Metal–Organic Frameworks with Gigantic Al ₂₄ Units and their Deconstruction into Molecular Clusters. Angewandte Chemie, 2023, 135, . | 1.6 | 0 |
| 173 | Green Synthesis and Applications of Metal-Organic Frameworks. , 2022, , 1-20. | | 0 |
| 174 | Confined Water Cluster Formation in Water Harvesting by Metal–Organic Frameworks: CAUâ€10â€H versus CAUâ€10â€CH ₃ . Advanced Materials, 0, , . | 11.1 | 5 |
| 175 | 2D Covalent Organic Framework for Water Harvesting with Fast Kinetics and Low Regeneration Temperature. Angewandte Chemie, 2023, 135, . | 1.6 | 2 |
| 176 | 2D Covalent Organic Framework for Water Harvesting with Fast Kinetics and Low Regeneration Temperature. Angewandte Chemie - International Edition, 2023, 62, . | 7.2 | 16 |
| 177 | Advanced Material Design and Engineering for Waterâ€Based Evaporative Cooling. Advanced Materials, 2024, 36, . | 11.1 | 10 |
| 178 | Metal-organic frameworks as regeneration optimized sorbents for atmospheric water harvesting. Cell Reports Physical Science, 2023, 4, 101252. | 2.8 | 11 |
| 179 | Molecular understanding of the impacts of structural characteristics on ethanol adsorption performance for adsorption heat pumps. Molecular Systems Design and Engineering, 2023, 8, 733-742. | 1.7 | 1 |
| 180 | Metal–Organic Frameworks for Water Harvesting and Concurrent Carbon Capture: A Review for Hygroscopic Materials. Advanced Materials, 2024, 36, . | 11.1 | 25 |
| 181 | Catalytic adsorptive elimination of deleterious contaminant in a pilot fluidised-bed reactor by granulated Fe3O4/Cu-MOF/cellulose nanocomposites: RSM optimisation and CFD approach. International Journal of Environmental Analytical Chemistry, 0, , 1-22. | 1.8 | 5 |
| 182 | Quantitatively Visualizing the Thermal Dehydration Process and Isotope Effect in Single HKUST-1 Metal–Organic Framework Particles. Journal of Physical Chemistry Letters, 2023, 14, 2099-2105. | 2.1 | 2 |
| 183 | Isomer of NU-1000 with a Blocking <i>c</i> -pore Exhibits High Water–Vapor Uptake Capacity and Greatly Enhanced Cycle Stability. Journal of the American Chemical Society, 2023, 145, 4150-4157. | 6.6 | 14 |

| # | Article | IF | CITATIONS |
|-----|---|------|-----------|
| 184 | A Novel Aluminumâ€Based Metalâ€Organic Framework with Uniform Micropores for Trace BTEX Adsorption. Angewandte Chemie, 2023, 135, . | 1.6 | 1 |
| 185 | A Novel Aluminumâ€Based Metalâ€Organic Framework with Uniform Micropores for Trace BTEX Adsorption. Angewandte Chemie - International Edition, 2023, 62, . | 7.2 | 9 |
| 186 | Progress on fundamentals of adsorption transport of metal-organic frameworks materials and sustainable applications for water harvesting and carbon capture. Journal of Cleaner Production, 2023, 393, 136253. | 4.6 | 6 |
| 187 | A systematic review of metal organic frameworks materials for heavy metal removal: Synthesis, applications and mechanism. Chemical Engineering Journal, 2023, 460, 141710. | 6.6 | 55 |
| 188 | Surface-Functionalized Metal–Organic Frameworks for Binding Coronavirus Proteins. ACS Applied Materials & Coronavirus Proteins & Coron | 4.0 | 9 |
| 189 | Polyoxometalates immobilized on MIL-100 (Fe) as an emerging platform for eliminating breast cancer tumor cells. Results in Chemistry, 2023, 5, 100857. | 0.9 | 2 |
| 190 | Construction of MOFs-based nanocomposite membranes for emerging organic contaminants abatement in water. Frontiers of Environmental Science and Engineering, 2023, 17, . | 3.3 | 7 |
| 191 | Morphology control through the synthesis of metal-organic frameworks. Advances in Colloid and Interface Science, 2023, 314, 102864. | 7.0 | 14 |
| 192 | Water harvesting properties of a zwitterionic metal–organic framework. Molecular Systems Design and Engineering, 2023, 8, 580-585. | 1.7 | 1 |
| 193 | Effect of the Heterocyclic Groups on the Anti-corrosion Performance of Heterocyclic Schiff Bases of Benzothiazole for Mild Steel in 1ÂM Aqueous HCl. Journal of Bio- and Tribo-Corrosion, 2023, 9, . | 1.2 | 2 |
| 194 | Sorptionâ€Based Atmospheric Water Harvesting: Materials, Components, Systems, and Applications. Advanced Materials, 2023, 35, . | 11.1 | 16 |
| 195 | Techno-economic Assessment of Atmospheric Water Harvesting (AWH) Technologies. Water Science and Technology Library, 2023, , 153-183. | 0.2 | 2 |
| 196 | When Polymorphism in Metal–Organic Frameworks Enables Water Sorption Profile Tunability for Enhancing Heat Allocation and Water Harvesting Performance. Advanced Materials, 2024, 36, . | 11.1 | 8 |
| 197 | Monolithic Zirconiumâ€Based Metal–Organic Frameworks for Energyâ€Efficient Water Adsorption Applications. Advanced Materials, 2023, 35, . | 11.1 | 7 |
| 198 | Hierarchical 3D Flowerâ€like Metal Oxides Micro/Nanostructures: Fabrication, Surface Modification, Their Crucial Role in Environmental Decontamination, Mechanistic Insights, and Future Perspectives. Small, 2023, 19, . | 5.2 | 8 |
| 199 | Hydrogels improved parsley (<i>Petroselinium crispum</i> (Mill.) Nyman) growth and development under water deficit stress. PeerJ, 0, 11, e15105. | 0.9 | 1 |
| 200 | Mesoporous Silicaâ€Guided Synthesis of Metal–Organic Framework with Enhanced Water Adsorption Capacity for Smart Indoor Humidity Regulation. Small Structures, 2023, 4, . | 6.9 | 1 |
| 201 | Covalent Organic Frameworks for Extracting Water from Air. Angewandte Chemie - International Edition, 2023, 62, . | 7.2 | 14 |

| # | Article | IF | CITATIONS |
|-----|--|------|-----------|
| 202 | Covalent Organic Frameworks for Extracting Water from Air. Angewandte Chemie, 0, , . | 1.6 | 1 |
| 203 | Understanding the Role of Synthetic Parameters in the Defect Engineering of UiO-66: A Review and Meta-analysis. Chemistry of Materials, 2023, 35, 3057-3072. | 3.2 | 7 |
| 204 | Carbon monoxide separation: past, present and future. Chemical Society Reviews, 2023, 52, 3741-3777. | 18.7 | 7 |
| 205 | Microencapsulated paraffin with SiO2 and Cu-BTC composite shell as shape-stabilized thermal energy storage materials. Energy and Buildings, 2023, 290, 113102. | 3.1 | 4 |
| 207 | Green Synthesis and Applications of Metal-Organic Frameworks. , 2023, , 91-110. | | 0 |
| 217 | MOFganic Chemistry: Challenges and Opportunities for Metal–Organic Frameworks in Synthetic Organic Chemistry. Chemistry of Materials, 2023, 35, 4883-4896. | 3.2 | 4 |
| 220 | Hydrothermal Treatment of Biomass Feedstocks for Sustainable Production of Chemicals, Fuels, and Materials: Progress and Perspectives. Chemical Reviews, 2023, 123, 7193-7294. | 23.0 | 39 |
| 224 | Ultrafast Water H-Bond Rearrangement in a Metal–Organic Framework Probed by Femtosecond Time-Resolved Infrared Spectroscopy. Journal of the American Chemical Society, 2023, 145, 11482-11487. | 6.6 | 11 |
| 225 | Recent advances in metal–organic framework/carbon nanotube nanocomposites for developing analytical applications. Nanoscale, 2023, 15, 11457-11465. | 2.8 | 1 |
| 228 | Sorbents, processes and applications beyond water production in sorption-based atmospheric water harvesting., 2023, 1, 573-586. | | 4 |
| 234 | MOF–ammonia working pairs in thermal energy conversion and storage. Nature Reviews Materials, 2023, 8, 636-638. | 23.3 | 2 |
| 241 | Interfacial chemistries in metal–organic framework (MOF)/covalent–organic framework (COF) hybrids. Nanoscale, 2023, 15, 13187-13201. | 2.8 | 1 |
| 261 | Industrial aspects of water-based metal–organic frameworks. , 2024, , 303-312. | | 0 |
| 278 | Recent advances in metal–organic frameworks for water absorption and their applications. Materials Chemistry Frontiers, 2024, 8, 1171-1194. | 3.2 | 0 |
| 284 | EFFECT OF POLYMER NETWORK ON SORPTION MASS TRANSFER IN HYGROSCOPIC HYDROGELS. , 2023, , . | | 0 |
| 285 | Investigation of porous coordination polymers for gas storage and separation. , 2024, , 137-176. | | 0 |
| 286 | Stability of Metal–Organic Frameworks: Recent Advances and Future Trends. , 0, , . | | 0 |
| 292 | Application of DUT-4 MOF structure switching for optical and electrical humidity sensing. Dalton Transactions, 2024, 53, 3459-3464. | 1.6 | 0 |

Article IF Citations